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CERTIFICATION OF SOURCE-IDENTIFIED TREE SEED UNDER THE OECD SCHEME IN OREGON AND WASHINGTON U.S.A.

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CERTIFICATION of SOURCE - IDENTIFIED TREE SEED under the O E C D SCHEME in OREGON AND WASHINGTON U.S.A.

BY P. E. HOEKSTRA

FOREST SERVICE
U.S. DEPARTMENT OF AGRICULTURE
WASHINGTON, D.C. 20250

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INTRODUCTION

The Organization for Economic Cooperation and Development (OECD) published the text of the Rules and Directions for the Scheme for the Control of Forest Reproductive Material Moving in International Trade as established by the OECD Council Decision of March 5, 1974.

The object of the OECD Scheme for Forest Reproductive Material is to encourage the production and use of seeds, parts of plants, and plants that have been collected, transported, processed, raised, and distributed in a manner that ensures their trueness to name.

The OECD Scheme is open, on a voluntary basis, to all member countries of the Organization as well as to member countries of the United Nations Organization or its specialized agencies. Participation, however, is subject to strict adherence to the rules.

The United States of America, as a member of OECD, participated in developing the rules and directions of the Scheme. The Forest Service of the Department of Agriculture has been appointed as Designated Authority to implement the Scheme. In the absence of a Federal tree seed law, certification is within the purview of the State governments. The Forest Service, therefore, has re-delegated its authority to implement the Scheme by "Cooperative Agreement" to the official seed certification agencies of those States who wish to participate in the Scheme. The Forest Service, however, retains overall supervision of the application of the Scheme.

Cooperative agreements have been executed, among others, with:

a. Washington State Crop Improvement Association, Post Office Box 617, Yakima, Washington 98907, and

b. Oregon Seed Certification Service, Cooperative Extension Service, 102 Farm Crops Building, Oregon State University, Corvallis, Oregon 97331.

The Scheme describes four categories of reproductive material that will be certified:

1. Source-Identified Reproductive Material: the two requirements of this category are (a) the region of provenance where the reproductive material is collected and the origin of the basic material (which may be indigenous or non-indigenous) shall be defined and registered by a Designated Authority and (b) the seed shall be collected, processed, and stored, and plants shall be raised under the control of a Designated Authority.

2. Selected Reproductive Material: the three requirements of this category are (a) the provenance or region of provenance where the reproductive material is collected and the origin of the basic material (which may be indigenous or non-indigenous) shall be defined and registered by a Designated Authority; (b) the reproductive material shall be derived from basic material which conforms to certain requirements and has been approved and registered by a Designated Authority; (c) the seed shall be collected, processed, and stored, and plants shall be raised under the control of a Designated Authority.

3. Reproductive Material from Untested Seed Orchards: the three requirements of this category are (a) the provenances or regions of provenance from which the components of the seed orchard came and the origin of these components (they may be indigenous or non-indigenous) or breeding records shall be defined and registered by a Designated Authority; (b) the reproductive material shall be derived from basic material which conforms to certain requirements and has been approved and registered by a Designated Authority; (c) the seed shall be collected, processed, and stored, and plants shall be raised under the control of a Designated Authority.

4. Tested Reproductive Material; the four requirements of this category are (a) the place where the reproductive material is collected and the origin of the basic material (which may be indigenous or non-indigenous) shall be defined and registered by a Designated Authority; (b) the genetic superiority of the basic material shall be proved by tests; (c) the results of the tests shall be registered by a Designated Authority; (d) the seed shall be collected, processed, and stored, and plants shall be raised under the control of a Designated Authority.

Only source-identified material will be certified under the Scheme in Oregon and Washington until such a time as material from higher classifications becomes available.

IMPLEMENTATION OF THE SCHEME

The official seed certification agencies in Oregon and Washington have been certifying tree seed under identical standards promulgated by the States (see Appendix: State Regulations and Instructions to Seedsmen). State certification standards for source-identified seed (both subclasses A and B) have been determined to be equal to and compatible with the OECD source-identified category. Upon request by a seedsman wishing to export seed, the State Certifying Agency will furnish OECD yellow tag and certificate to cover lots already certified under the State certification program. The State certification class "Audit" is not compatible with and shall not receive OECD certification.

ORIGIN

Origin of the seed will be identified as one of the following:

a. indigenous--collected from a stand of trees which has been continously regenerated by natural seeding, or one raised artifically from seed collected in an indigenous stand of the same region of provenance.

b. introduced (non-indigenous)--collected from a stand which grew from seeds or plants outside the local region of provenance. The original provenance is to be specified.

c. unknown--when neither (a) nor (b) can be assigned with certainty.

REGIONS OF PROVENANCE

Regions of provenance or "tree seed zones" are used to identify source of collection. Wherever possible, the zone lines follow natural boundaries such as crests of mountain ranges, ridge tops, rivers, or physical boundaries such as highways and railroads, since it would be impossible for cone collectors to recognize any other type of boundary.

A three-digit numbering system is used to designate the tree seed zones in Oregon and Washington. The first digit identifies broad geographic regions covering the following physiographic and geological provinces of Washington and Oregon (Franklin, J.F. and C.T. Dyrness, 1973. Natural vegetation of Oregon and Washington, USDA Forest Service, Pacific Northwest Forest and Range Experiment Station, General Technical Paper PNW-8, 417 p.). Climatic and native vegetation similarities were considered in the zoning process.

0 - West Slope Olympic Peninsula, West Slope Coast Ranges, Klamath Mountains.

2 - East Slope Olympic Peninsula, Puget Trough, East Slope Coast Ranges Willamette Valley, Southwest Cascades.

3 - South of summit of Klamath Mountains along Oregon and California border.

4 - West Slope Cascades.

5 - Eastern Klamath Mountains, Southwest Cascades Fringe.

6 - East Slope Cascades, Western Okanogan Highlands, Western Columbia Basin, Western Blue Mountains, Western High Lava Plains.

7 - East Slope Southern Oregon Cascades, Southwest High Lava Plains, Western Basin and Range.

8 - Central and Eastern Okanogan Highlands, Central and Eastern Columbia Basin, Northeast Blue Mountains.

9 - Southern Blue Mountains, Eastern High Lava Plains, Eastern Basin and Range, Owyhee Upland.

The second digit identifies a physiographic and climatic zone and the third digit identifies a further breakdown into subzones to recognize local climatic similarities. The subzones are further divided into 500-foot elevational bands as follows:

Elevation means altitude above sea level and is expressed in code in 500-foot increments as follows:

0 - 500 feet -- Code 05	2501 - 3000 feet -- Code 30
501 - 1000 feet -- Code 10	3001 - 3500 feet -- Code 35
1001 - 1500 feet -- Code 15	3501 - 4000 feet -- Code 40
1501 - 2000 feet -- Code 20	4001 - 4500 feet -- Code 45
2001 - 2500 feet -- Code 25	4501 - 5000 feet -- Code 50
	and so forth.

Example of source (location) code is 011-05. This means that the tree seed was collected in the 0-500 foot elevation band of the Clallam Bay-Tatoosh Island seed zone.

See Appendix for selected climatic data for Oregon and Washington

APPENDIX

STATE OF WASHINGTON
DEPARTMENT OF AGRICULTURE
Order No. 1369
Effective July 12, 1974

WAC 16-319-020 FOREST TREE SEED CERTIFICATION STANDARDS.1/

1. Purpose. The purpose of forest tree seed certification is to make available seed properly identified by species or species and cultivar, and by source or source and origin.

2. Definitions.

a. Origin means the location of the indigenous parents.

b. Source means the location of the immediate parents, which may be indigenous or non-indigenous.

c. Location means description by seed zone or portion thereof and elevation.

d. Seed Zone means a geographic area delineated on Western Forest Tree Seed Council's Tree Seed Zone Map published in 1974.

e. Elevation means altitude above sea level and is expressed in code in 500-foot increments as follows:

0 - 500 feet	Code 05	2501 - 3000 feet	Code 30
501 - 1000 feet	Code 10	3001 - 3500 feet	Code 35
1001 - 1500 feet	Code 15	3501 - 4000 feet	Code 40
1501 - 2000 feet	Code 20	4001 - 4500 feet	Code 45
2001 - 2500 feet	Code 25	4501 - 5000 feet	Code 50
		and so forth.	

f. Certifying Agency means the duly designated State agent: In Washington State, the Washington State Crop Improvement Association, Inc., Post Office Box 617, Yakima, Washington 98907 (in Oregon State, the Oregon Seed Certification Service, Cooperative Extension Service, 102 Farm Crops Building, Oregon State University, Corvallis, Oregon 97331).

g. Applicant means person or organization who submits application for seed certification to certifying agency and who assumes responsibility for compliance with these standards.

h. Certification of Seed means execution by certifying agency of field inspection, plant/warehouse inspection, and/or audit to accomplish the purpose described in paragraph 1.

1/ Underscoring in the text indicates a direct reference to specific terms which are defined or described herein.

i. Field Inspection means observation by certifying agency of all activities and records involved in collection, buying, and transportation of cones to assure compliance with field standards.

j. Plant/Warehouse Inspection means observation by certifying agency of all activities and records involved in receiving, processing, storage, and labeling of cones and seed to assure compliance with cone and seed processing standards.

k. Audit means periodic examination and check by certifying agency of any part or all of the records only specified in field standards and cone and seed processing standards and of additional records pertinent to inventory and distribution of seed including verification of corresponding physical inventory to assure that no significant errors or omissions exist.

l. Lot means a homogeneous quantity of cones or seed which for source identified seed or audit certificate seed is of a single species collected during one crop season from within stated seed zone(s) and from within stated 500-foot elevation increment(s), and which for certified seed or selected seed is seed of a single species or cultivar collected during one crop season from one distinctive described population of trees. Lots shall be identified distinctively by number and/or code.

m. Batch means all or a part of a lot of cones or seed of a single species collected during one crop season from within a single seed zone and from within a single 500-foot elevation increment and collected or processed at one time, which may be combined subsequently with other batches into a lot. Batches shall be identified distinctively as they are processed by number and/or code.

n. Cone Collector means person who picks or gathers cones or seed at their source.

o. Cone Buyer means person who first receives cones or seed from cone collector.

p. Unit of cones means a consistent volume measure of cones.

q. Certificate of origin means a document issued by certifying agency which states source of seed.

r. Character means a distinctive feature, trait, or property of an organism controlled chiefly by a certain gene or group of genes.

s. Certificate of Genetic Identity means a document describing the ancestry and breeding behavior of a lot of certified or selected seed.

WAC 16-319-030 CLASSES OF SEED.

1. Certified Seed means seed from trees of proven genetic identity, as described in the Certificate of Genetic Identity. Further, such seed is produced and processed in a manner assuring genetic identity common with the tested material. Said seed shall be labeled with a blue label stating "Certified Seed." Certifying agency shall examine trees prior to collection of cones and shall exercise field inspection, plant/warehouse inspection and audit. Further, certifying agency shall examine all records pertinent thereto prior to affixing labels and seals to containers of seed.

2. Selected Seed means seed from trees having promise of, but not proof of genetic identity, as described in the Certificate of Genetic Identity. Said seed shall be labeled with a green label stating "Selected Seed". Certifying agency shall examine trees prior to collection of cones, and shall exercise field inspection, plant/warehouse inspection,and audit. Further, certifying agency shall examine all records pertinent thereto prior to affixing labels and seals to containers of seed.

3. Source Identified Seed means seed from within a seed zone or portion thereof and from within a 500-foot elevation increment. The trees from which said seed is collected shall be assumed to be indigenous. Two subclasses are recognized:

Subclass A: personally supervised collections.
Subclass B: procedurally supervised collections.

Both subclasses of said seed shall be labeled with a yellow label stating "source-identified seed" and the subclass. Certifying agency shall exercise field inspection, plant/warehouse inspection, and audit.

a. Subclass A Source Identified Seed means that applicant and certifying agency personally know beyond a reasonable doubt the seed zone or portion thereof and 500-foot elevation increment within which cones and/or seed were collected. Certifying agency knows location from applicant's prior written plan of his cone collecting activities.

b. Subclass B Source Identified Seed means seed identified as collected from within a seed zone or portion thereof and from within a 500-foot elevation increment.

4. Audit Certificate Seed means that the applicant's records of procurement, processing, storage, and distribution state that the seed was collected from within stated seed zones or described portions thereof and from within 500-foot elevation increments. For areas not delineated on Western Forest Tree Seed Council's Tree Seed Zone Map published in 1974, certifying agency may accept

seed zones on similarly authoritative map of seed zones as approved by certifying agency. Containers of said seed shall carry a serially numbered brown and white label stating "audit certificate seed." All records of the applicant for this class of seed are subject to audit.

WAC 16-319-041 APPLICATION FOR SEED CERTIFICATION.

1. The conditions of applicant's submittal and of certifying agency's acceptance of application are:

a. All seed acquired or distributed by applicant is subject to audit.

b. Applicant is and shall be responsible for payment of fees for certification of seed services.

c. Applicant shall furnish and use labels and records satisfactory to certifying agency.

d. Certifying agency reserves the right to refuse certification of seed service to applicant.

e. Application for audit certificate seed shall be filed with certifying agency of State in which warehouse is located.

2. The application with fees for current year's crop shall be received by certifying agency from applicant not later than three days prior to initiation of cone collection. Service for certification of seed will be furnished only if payment as specified below is received with such advance application.

3. Schedule of fees. Fees may be adjusted if certifying agency determines that costs are significantly more or less than anticipated, provided that increases shall not exceed 25 percent of the following schedules.

a. Service for certification of seed of certified and/or selected class will be charged for at the rate of $12.50 per man-hour job time for examination of records and of trees prior to cone collection plus the fee as specified for source identified seed.

b. The fee for source identified seed is $.50 per bushel of cones collected, with a minimum fee of $30.00 for each collection in one crop year of a single species from a single zone or portion thereof and from a single elevation increment unless certifying agency, due to specific circumstances, waives this minimum fee.

Sixty percent of the fee shall be paid with the application, the remainder to be paid when billed by the certifying agency after processing is completed. The full $.50 per bushel fee shall apply to all bushels presented for source identified certification whether or not approved.

c. The fee for audit certificate seed is:

(1) Initial audit for current year's crop charged for at the rate of $12.50 per man-hour job time.

(2) Plus $.05 per pound for audit certificate seed from 1968 and subsequent crops sold or entering commerce, payment accompanying application for certification service shall be in amount of at least $.03 per pound of planned production of clean seed. Balance will be due when billed by certifying agency.

d. The fee for audit of seed not entered for certification of seed service is at the rate of $12.50 per man-hour limited only to job time required by and satisfactory to certifying agency to exercise said audit simultaneously with audit of seed for which applicant has requested certification of seed service.

e. Services other than field inspection, plant/warehouse inspection, and audit may be provided on cost basis.

WAC 16-319-051 FIELD STANDARDS.

1. Certified Seed and Selected Seed: Certifying agency shall examine trees before cones are collected; additionally, field standards prescribed below for Source Identified Seed Subclass A are required.

2. Source identified seed: Applicant shall develop and make correct use of cone collector labels, and cone collector registration, cone buyer, and transportation logs.

a. Subclass A.

(1) Control of cone collectors shall be such that applicant and certifying agency personally know beyond a reasonable doubt the seed zone or portion thereof and 500-foot elevation increment within which cones and/or seed were collected.

(2) Applicant shall provide certifying agency a written cone collection plan prior to collection.

(3) Further, all following requirements of Subclass B shall be met.

b. Subclass B.

(1) All cone collectors shall be supervised sufficiently so that either cone buyers know where cones were collected, or cone buyers shall purchase all cones that cone collectors present for sale with no differential of acceptance, stated or implied, as to source, location, seed zone, or elevation.

(2) Cone buyer shall require cone collector to sign cone collector's registration log prior to collection of cones. He shall also issue cone collector's labels, and direct cone collector to complete them and place them in or attach them to each container of cones before it is transported from point of collection. Coincident with purchase of cones, he shall complete description on the cone sack label including species, source by seed zone, elevation increment, special collection area if any, certification class, date of purchase, and his signature or initials.

(3) Cone buyer shall maintain, on a serially numbered form, a cone buyer log for all cones received, listing species, seed zone, elevation increment, units of cones, date of purchase, cone collector's name, and cone buyer.

(4) Cone buyer shall maintain transportation log showing species, seed zone, elevation increment, units of cones, and date shipped.

(5) The certifying agency shall advise the applicant of problems about conditions that effect competent execution of these standards by the certifying agency and applicant.

3. Audit certificate seed:

a. Cone buyer shall require cone collectors to sign cone collector's registration log and to complete cone collector's labels prior to purchase of cones.

b. Cone buyer shall maintain, on a serially numbered form, cone buyer log for all cones received, listing species, seed zone, elevation increment, units of cones, date of purchase, cone collector's name, and cone buyer.

c. Cone buyer or other shipper of cones shall maintain transportation log showing species, seed zone, elevation increment, units of cones, and date shipped.

WAC 16-319-061 CONE AND SEED PROCESSING STANDARDS.

1. The applicant shall maintain a continuous record for each lot and batch of cones and seed at each plant or warehouse, showing lot and batch number, species, seed zone, elevation increment, date received, units of cones, and weight of cleaned seed. Cones stored at plant or warehouse prior to processing shall be assembled by lot or batch and so arranged as to be reasonably accessible for audit.

2. Cone labels shall be maintained on cone sacks until processing. As cone sacks are emptied during processing, cone labels shall be removed and immediately deposited in a container marked with the lot or batch designation. Upon completely emptying the sacks for each lot or batch, the package of cone labels from it shall be closed and set aside for examination by the certifying agency auditor.

3. All cones and seed shall be handled in a manner to prevent lot mixture and maintain lot identity. All machinery is to be thoroughly cleaned before processing another lot or batch.

4. Specific requirement: Certifying agency may refuse to certify seed failing to meet the following standard: Other distinguishable species or cultivars (maximum by weight) 0.5%.

5. Labeling and sealing of certified, selected, or source identified seed shall be done by the certifying agency. Labeling of audit certificate seed will be done by the applicant with the certification label being affixed to the seed container label: Provided, that for small sales (any quantity of seed less than a full container of a size normally used by the applicant), the certification label may be affixed to the invoice or sales slip.

6. For each lot of certified seed or selected seed, a Certificate of Genetic Identity shall be prepared and affirmed by the seed producer and if verified be signed and sealed by the certifying agency before labels and seals are affixed to seed packages. Said certificate shall include the following information:

a. For both certified seed and selected seed, the lot number and information on:

(1) the parents which produced the seed, including their selection generation, type of selection made, character(s) selected for, location including seed zone(s) and elevation increment(s) in which selection was made, and selection procedure;

(2) for each prior selection generation the same information;

(3) for the seed to be labeled, whether pollination was controlled; if not controlled, the pollen situation; if controlled, the pollen mix used, including number of pollen parents if known, also the number of maternal parents, and, if applicable, the crossing design used.

b. For certified seed only, information on evaluation test(s), including geographic, climatic, and ecological description of the test site; controls used; age of progeny when tested; superior character(s); performance proven; and other significant character(s) observed.

7. A document, acceptable to the certifying agency, for informing the purchaser of species and certification information of each item, and for auditing purposes, shall be issued by the seedsman for each sale of certified, selected, source identified, and audit certificate seed. Such document may be a certificate of origin, invoice, shipping order, or sales slip. The certifying agency may authorize use of said certificate of origin for portions of seed from labeled and sealed containers in lieu of labels and seals when relabeling and resealing is impractical. No items of seed ineligible for any class of certification shall be included on any certificate of origin.

8. If a lot is composed of seed from more than one seed zone or elevation increment in excess of seven percent if of contiguous seed zones or elevation increments, or if in excess of two percent of other than contiguous seed zones or elevation increments, the certification label must show all seed zones and/or elevation increments, either with or without the percentage of each.

9. Any lot may be rejected if certifying agency determines that said lot fails to meet these standards. The privilege of certification may be withdrawn by certifying agency for a definite period of time in case of flagrant violations of these standards. If applicant believes an erroneous decision has been rendered, he may make written appeal to certifying agency, and its governing body shall review the written appeal.

WAC 16-319-071 AUDIT STANDARDS.

Certifying agency shall exercise audit to verify that proper procedures have been followed for keeping records specified in field standards and cone and seed processing standards.

WAC 16-319-081

Affixing of label or label and seal to a container of seed or to certificate of origin by certifying agency affirms that to the best of its knowledge the seed meets these Forest Tree Seed Certification Standards.

PROCEDURES FOR THE

FOREST TREE SEED CERTIFICATION PROGRAM

Note: This statement of procedures supplements and does not repeat the requirements in the Regulations or Standards.

FIELD INSPECTION

SOURCE IDENTIFIED CLASS

SUBCLASS A

A. Written plan to be submitted by applicant to certifying agency prior to start of collections will contain the following minimum information.

1. Location or locations where collections are planned by zone, elevation,and specific locality or localities.

2. Number of bushels of cones estimated for collection by species and location.

3. Probable number and size of crews and names of probable crew leaders.

4. Name, address, and telephone number of applicant's representative for each area of collection.

5. Planned dates of collection.

6. Any special instructions for reaching collection areas and locating collectors.

7. Arrangements for daily information on where each crew will be working.

8. Method to be used for distinctive marking of cone collectors labels for Subclass A cones.

B. Upon receipt, certifying agency will review plan and promptly advise applicant of receipt of plan and if plan is incomplete.

C. Certifying agency field inspector's (C.A.F.I.) objective shall be to visit each working crew in woods at least once early in the collection season and periodically thereafter. Should inspector find any deficiency, he is to promptly advise applicant or applicant's representative, and then make necessary follow-up inspection shortly or as may then be agreed upon between them.

D. Further, all following requirements of Subclass B shall be met.

SUBCLASS B

A. Cone labels and labeling. Applicants are responsible for providing their cone buyers and cone collectors with satisfactory cone labels, and also for instructing and supervising to secure correct labeling. Specifications for satisfactory cone labels follow:

1. Lables should provide for separate statements by cone collector and by cone buyer. These may be on different portions of a single label or on separate labels.

2. Labels should be of weather resistant stock with a reinforced eye for use in tying to sack of cones.

3. Since cone labels must be distributed and initially used long before the certification class of the resulting seed can be determined, no attempt should be made to correlate label color with seed certification class. To avoid possible confusion, cone labels should be in colors other than yellow, green, or blue.

4. Printed headings and space for the following entries should be provided:

a. Cone collector's statement including:

(1) Locality by place name where cones were collected.

(2) Estimated elevation or elevational range of collection area.

(3) Date of collection.

(4) Signature below the above information and following printed statement "I certify that the above information is correct to the best of my knowledge."

b. Cone Buyer's statement of same identification including:

(1) Species

(2) Source by

(a) Seed zone number; and

(b) Elevation increment code.

(3) Date cones received and entries made.

(4) Signature below above information and statement "I certify above information is correct."

(5) Certification class.

c. Seedsmen usually will want to provide additional information including company name and possibly space for "special source designation----------."

B. Certifying agency's field inspection shall be adequate to determine, for the area of each cone buyer or supervisor of collections, that collections or portions thereof are or are not being made in compliance with applicable standards. Inspectors are to strive to contact as many collectors in the woods as practical. Actual intensity should vary from area to area, depending on the probabilities of mislabeling, considering all factors, including variations in topography, collectable cones, etc.

C. Applicant's buyer or supervisor of collections is to interrogate cone sellers or collectors, and then in presence of the latter either confirm or correct collector's location on label and over his (buyer's) signature state source by zone and elevation increment code.

D. Sacks of cones qualifying for this class are to be marked in a distinctive manner by the C.A.F.I. at the buying station or field concentration point prior to shipment to the processing plant. Applicant's buyer or field supervisor and C.A.F.I. shall jointly agree on arrangements so this marking may be done efficiently, currently or periodically, without causing undesirable delays in shipping. If and when essential to ship cones not yet marked by C.A.F.I., buyer shall make arrangement with certifying agency for shipment to be intercepted and marking completed upon arrival at destination.

PLANT & WAREHOUSE INSPECTION

A. Processing Record - Certifying agency inspector will audit at each processing plant a record of seed produced by lots which shall include a comparison of seed produced with bushels or sacks of cones harvested and processed.

B. Certificates on Seed Packages - Audit certificate seed hereafter is to have the audit certificate attached to the seed package rather than to the invoice as heretofore. Applicant may place a certificate on each package of qualifying seed. It is to be attached before the seed is shipped. Applicant is to maintain a record in serial numbered form of all certificates so issued by certificate number, giving seed lot and weight of seed in container to which attached.

C. Inventory of Seed Produced or Purchased - Upon the applicant's completion of processing of the year's seed crop, the certifying agency will prepare a confidential inventory of seed by lots produced or purchased by said applicant. Certifying agency's distribution of the inventory shall be limited to applicant, certifying agency, and its auditor.

AUDIT BY CERTIFYING AGENCY

Certifying agency audits shall include:

A. Annual physical inventory of applicant's warehouse stock - This is made after the end of the winter shipping season and before the new fall crop is warehoused. This inventory will be made in company with applicant's representative where practical.

In the event such is not practical and applicant has independently made a physical inventory, this may be used as the certifying agency inventory if determined by spot inspection to be correct.

Inventory data will be checked against applicant's inventory records. Distribution of the inventory by certifying agency shall be limited to the applicant, the agency, and its auditor. All inventory information will be treated as confidential information by the agency and auditor.

B. Inventory Records -

1. Applicants are expected to maintain an auditable inventory record for each seed lot. It should include, as a minimum, the following information:

a. Lot description including species, crop year, source by zone and elevation increment codes, lot number if used, and certification class.

b. Running inventory by location in pounds and fractions (ounces or tenths of pounds) with additions and deletions to inventory by date, type of action, and reference. Reference should enable auditor to immediately identify purchase order, invoice, shipping order, or the document confirming recorded action.

The exact form of the inventory record is optional with applicant. A satisfactory form is on letter-size card stock using a separate card for each lot.

2. Certifying agency auditor will periodically inspect seed inventory records and related supporting documents.

C. To encourage proper use of certification service, it is desirable that invoices or shipping slips show the certificate class for each lot of seed shipped.

D. Sales & Disposal Records - Auditor will inspect these records, compare with applicant's inventory records, check that certification information on invoices is appropriate, post record of seed sold as basis for assessing poundage fees where warranted, and as he determines necessary, post an auditor's record of seed depletion.

E. Audit Certificates - Auditor will inspect record of issuance of audit certificates, including those issued as provided in Section II C and those issued on invoices. Record of those issued on invoices should refer to invoice number and date.

F. Whenever job time is to be charged, certifying agency shall furnish statement of same to applicant upon conclusion of each job time visit.

LABELS:

Each sack, package, or container of any class of "certified" tree seed, while in storage and when sold, shall have affixed to it, or within it and legible without opening, a label giving at least the following information on the contents: species, source by zone and elevation, lot number, and certification class.

AUDIT CERTIFICATES:

Certifying Agency will issue to each seedsman a supply of the serially numbered brown colored "Audit Certificate." Seedsman is to attach one certificate to each package of this class of seed sold, before shipping, except for small sales. Unless an alternative procedure is approved by Certifying Agency, the certificate shall be affixed to the seed package by sticking it to the package label that carries the description of seed.

Certifying Agency Auditor maintains a register of Audit Certificates issued to Seedsmen in the following form:

Audit Cert. Nos.	Issued to Seedsman	Date	By
1001-1200	Tree Seed Company	10-2-70	HGH

Seedsman is to maintain a register of use made of each "Audit Certificate" in numerical order. An acceptable form is:

Cert. Nos.	Date Issued	Detailed Record of Use on Cert. of Origin No.	or Invoice No.
1040-44	10-20-70	---	70-149
1045-52	12-5-70	14	----

SALES DOCUMENTS:

The document furnished the seed purchaser shall include for each item of any class of certified seed in the sale at least the information required for "Labels" above, plus the weight of seed in the item and the serial numbers of the certificates affixed to or covering the item.

CERTIFICATE OF ORIGIN:

A. Purposes of Certificate of Origin are to:

1. Furnish purchasers of certified tree seed with the information relating to source identity of the shipped seed on a standard, concise, impressive format.

2. Improve control of certification and simplify audit certification through use of a standard listing of pertinent information.

3. Reduce the sometimes-mentioned possibility that the Certifying Agency auditor is shown an invoice that doesn't correctly describe the seed actually shipped.

4. Meet requirements of foreign purchasers for a Certificate of Origin with a document that is truly meaningful.

5. Promote familiarity with, and demand for, "certified" tree seed.

6. Provide a procedure for Seedsmen's use in selling a portion from a sealed package of Source Identified seed without degrading either the portion sold or the remaining portion of the opened package.

B. Use of Certificate of Origin

A "Certificate of Origin" (CO) has been designed and printed as a serially numbered four-part letter-size form. Copies are available from the Certifying Agency auditor. The four parts include an original, printed on heavy paper with code information on the reverse, and three tissue copies all carrying the same serial number. The intended use follows.

Certifying Agency auditor will maintain supply of CO's and upon request will issue to seedsman a block of them completed by Agency Auditor. Original and first carbon of each set will be impressed by Agency notary-type stamp and signed by Agency representative. On original copy only notary-type gold seal will also be affixed. Space for date of Agency signature will be voided.

Seedsman will then complete one set of the CO for each sale of certified seed, filling in the blank spaces as appropriate. When completed and issued by seedsman the four copies should be distributed as follows:

Original to seed purchaser with invoice
First carbon also to purchaser or consignee with seed
Second carbon to seedsman's office files
Third carbon to be mailed currently by seedsman to Certifying Agency auditor

C. Opening Sealed Containers

Open sealed container and split out portion or portions to be shipped, attach serially numbered yellow tag certificate to portion remaining. Record numbers from yellow tag certificate on labels of portions shipped on "Certificate of Origin." On "Certificate of Origin" mark these items with an asterisk and make entry about as follows above seedsman's signature.

* -- Items so marked are portions of labeled and sealed container(s) carrying the indicated certificate number(s). Relabeling and resealing by Certifying Agency official was impractical.

Certifying Agency auditor, on the next call, will check seedsman's records and, if satisfied, will reseal label on remainder of such opened containers. Seedsman's records will be checked against auditor's Register of Yellow Tags previously issued. This Register is maintained in about this form:

			Description of Seed					
Tag No.(s)	Date	Used by	Seed Co.	Sp.	Zone	Elv.	Lot	Wt.
2001	4-5-69	LEB	Tree Seed Co.	DF	652	2.0	69-115	50

Certifying Agency auditor will also maintain a Register of "Certificate of Origin" in approximately the following form:

Cert. Serial No.	Signed for Cert. Agency by	Date	Issued to Seedsman	Date Copy Returned to Agency Auditor
1	HGH	10-20-70	Tree Seed Co.	10-28-70

D. Certificate of Origin for Foreign Purchases

The procedure that follows may be used in seed sales to foreign purchasers, when Certificate of Origin is requested in advance of shipment by purchaser for his use in securing an import permit. In these cases it may not be possible to enter all information on the Certificate of Origin, particularly the serial numbers of the certificates for each package. Seedsman may complete Certificate of Origin, all copies, with all information then available. The original copy marked "Incomplete - issued as basis for Import Permit" may be forwarded to purchaser. When shipment is made the remaining copies should be completed and distributed as usual.

CONE COLLECTOR REGISTRATION:

A. Purpose of Cone Collector Registration:

1. Provide seedsman, his field supervisors and cone buyer, and Certifying Agency field inspectors and auditors with a uniform,

organized procedure to record that each cone collector was in fact furnished cone collector's labels and directed in their proper use prior to cone collection.

2. Provide seedsman, his representatives, and Certifying Agency field representatives with information helpful in the proper field inspection of cone collector's activities.

3. Provide an auditable record of cone collector's signatures.

4. At option of seedsman, be used as a record of sacks issued and as an authorization to collector to collect on designated lands.

B. Format:

Any format is acceptable that will serve the purposes. Samples of two acceptable formats follow:

Sample 1 (use wide way of paper)

CONE COLLECTORS' REGISTRATION LOG

Seedsman_____ Buy Station_____
(location)

Buyer_____

Instruction to Buyer:

1. Have each member of party sign who may work independently, sign labels, or receive pay.
2. Use as many lines as necessary. Record both home address and local temporary address, if different.
3, Describe each vehicle to be used in collecting or hauling cones.
4. Log is to be available at Buy Station for ready inspection by representatives of seedsman and Certifying Agency.
5. At end of buying season send log to seedsman for filing with cone purchase records.

Collector(s) read and sign:

"I have been furnished labels and understand labeling requirements."

			Vehicle Description				
Date	Signature	Address	Make	Type	Year	Color	Registration

Sample 2

An individual registration on a serially numbered three-copy combination permit-to-collect and registration. Original signed by buyer and collector would be furnished to collector as his authority to collect cones in specified locations. One carbon would be retained by buyer for his and seedsman's records; the other carbon would be retained at the Buy Station for delivery to Certifying Agency field inspector. This format has the advantages that it may be more acceptable to cone collectors, doesn't disclose one collector's information to other collectors, and furnishes information needed by field inspectors of both seedsman and Certifying Agency in convenient form for carrying into field.

_____ SEED COMPANY Serial No. _____

CONE COLLECTORS' PERMIT AND REGISTRATION

_____

(cone collector's name)

_____

(residence address)

_____

(local temporary address if different)

USING THE FOLLOWING VEHICLE

_____	_____	_____	_____	_____
MAKE	TYPE	YEAR	COLOR	REGISTRATION

IS PERMITTED UNDER OUR AUTHORITY TO GATHER SEED CONES ON THE FOLLOWING LANDS:

_____

_____

CONE LABELS FURNISHED, LABELING REQUIREMENTS EXPLAINED.

Number of sacks and labels issued _____:Date_____

_____ _____

Collector's signature Signed for Seedsman

Seed Certification Service
102 Farm Crops Building
Oregon State University
Corvallis, Oregon 97331
Telephone 503-754-1513

Washington State
Crop Improvement Association, Inc.
513 North Front Street
Yakima, Washington 98901
Telephone 509-248-3240

LOCATION

State	County	Latitude North	Longitude West	Name	Elevation in Feet
Wash.	Clallam	48° 10′	123° 40′	Port Crescent	75
Wash.	Clallam	48° 10′	124° 25′	Clallam Bay	70
Wash.	Clallam	47° 50′	124° 24′	Forks	375
Wash.	Clallam	48° 25′	124° 35′	Tatoosh Island	50
Wash.	Jefferson	47° 05′	124° 25′	Clearwater	250
Wash.	Pacific	46° 40′	123° 45′	South Bend	50
Wash.	Grays Harbor	47°	123° 50′	Hoquiam	10
Wash.	Grays Harbor	47° 30′	123° 50′	Quinault	210
Wash.	Grays Harbor	47° 15′	123° 50′	Quinault-South Bend	200
Wash.	Grays Harbor	47° 10′	123° 50′	Wiskah	435
Wash.	Pacific	46° 20′	123° 40′	Naselle	25
Wash.	Wahkiakum	46° 10′	123° 25′	Cathlamet	476
Wash.	Grays Harbor	47°	123° 40′	Satsop	40
Wash.	Pacific	46° 20′	124°	North Head	196
Ore.	Lincoln	44° 40′	124°	Newport	155
Ore.	Lincoln	44° 20′	123° 50′	Tidewater	30
Ore.	Clatsop	46° 05′	123° 40′	Astoria Exp. Station	50
Ore.	Tillamook	45° 50′	123° 30′	Glenora	575
Ore.	Clatsop	45° 50′	123° 25′	Jewell	700
Ore.	Tillamook	45° 55′	124°	Tillamook	26
Ore.	Polk	44° 45′	123° 40′	Valsetz	1150
Ore.	Lincoln	44° 40′	124°	Toledo	200
Ore.	Benton	44° 40′	123° 45′	Summit	720
Ore.	Lane	44°	124°	Canary	50
Ore.	Douglas	43° 40′	124°	Reedsport	50
Ore.	Curry	42°	124° 10′	Brookings	162
Ore.	Curry	42° 40′	124° 30′	Port Orford	270
Ore.	Coos	43° 25′	124° 10′	North Bend	203
Wash.	San Juan	48° 30′	123°	Olga	100
Wash.	Jefferson	48° 05′	122° 50′	Chimacum	100
Wash.	Island	48° 15′	122° 20′	Coupeville	50
Wash.	Jefferson	47° 45′	122° 50′	Quilcene	124
Wash.	Clallam	48° 6′	123°	Sequim	200
Wash.	Jefferson	47° 50′	123°	Louella	1100
Wash.	Mason	47° 25′	123° 15′	Cushman Dam	790
Wash.	Kitsap	47° 40′	123° 25′	Keyport	17
Wash.	Snohomish	48° 05′	122°	Granite Falls	600
Wash.	Skagit	48° 30′	122° 10′	Sedro Woolley	56
Wash.	Skagit	48° 30′	121° 45′	Concrete	243
Wash.	Snohomish	47° 50′	121° 45′	Startup	560
Wash.	Snohomish	48° 10′	121° 35′	Darrington	550
Wash.	Snohomish	48° 15′	122° 10′	Arlington	205
Wash.	Whatcom	48° 50′	122°	Glacier	937
Wash.	King	47° 30′	121° 50′	Snoqualmie Falls	430
Wash.	King	47° 45′	121° 05′	Stevens Pass	4061
Wash.	King	47° 25′	121° 30′	Snoqualmie Pass	3010
Wash.	King	47° 15′	122°	Mud Mountain	1308
Wash.	Lewis	46° 40′	121° 50′	Randle	912
Wash.	Grays Harbor	47°	123° 30′	Elma	250
Wash.	Skamania	45° 45′	121° 30′	Wind River	1130
Wash.	Thurston	46° 45′	122° 40′	Centralia	182
Wash.	Lewis	46° 45′	123° 15′	Centralia	182
Wash.	Pierce	46° 35′	122°	Mineral	1440
Wash.	Cowlitz	46° 15′	123°	Kid Valley	690
Ore.	Lane	43° 45′	123°	Leaburg	675
Ore.	Columbia	45° 50′	123° 15′	Vernonia	748
Ore.	Multnomah	45° 50′	122° 15′	Bonneville	85
Ore.	Clackamas	45° 20′	122° 20′	Cazadero	414
Ore.	Clackamas	45° 15′	122° 15′	Molalla	100
Ore.	Linn	44° 25′	122° 40′	Cascadia	796
Ore.	Marion	44° 40′	122° 10′	Detroit	1450
Ore.	Linn	43° 50′	123°	Cottage Grove	822
Ore.	Lane	44° 10′	122° 50′	Oak Ridge	1313
Ore.	Douglas	43° 40′	123° 15′	Drain	302
Ore.	Douglas	43°	123° 30′	Riddle	703
Ore.	Coos	43° 15′	124° 10′	Powers	300
Ore.	Jackson	42° 10′	122° 45′	Ashland	1956
Ore.	Jackson	42° 45′	122° 30′	Prospect	2473
Ore.	Douglas	43° 05′	122° 05′	Diamond Lake	

MOST REPRESENTATIVE WEATHER STATION

TEMPERATURE				PRECIPITATION		NUMBER OF FROST FREE DAYS
AVERAGE SUMMER (°F)	AVERAGE FOR YEAR (°F)	ABSOLUTE MAXIMUM (°F)	ABSOLUTE MINIMUM (°F)	SUMMER (INCHES)	ANNUAL (INCHES)	
*	47	83	7	8.5	40	203
54	48	97	8	18	80	176
56	49	101	—4	26	115	174
52	48	88	7	21	84	311
56	49	100	11	30	123	199
57	51	103	4	19	83	202
56	50	96	21	14	62	*
58	51	104	11	30	126	208
57	51	103	7	25	105	205
*	*	*	*	29	119	*
*	*	*	*	23	111	*
*	*	*	*	17	81	*
*	*	*	*	14	64	*
54	50	97	11	14	59	297
54	51	100	1	17	66	248
60	53	*	*	20	89	*
57	50	104	11	16	66	275
57	49	106	3	27	129	140
57	50	103	—4	14	69	166
55	51	101	0	22	94	182
57	50	*	*	23	114	*
57	52	102	8	16	76	195
*	*	*	*	12	62	*
57	52	*	*	15	75	*
57	52	*	*	14	73	*
56	53	100	17	15	75	269
56	50	90	15	14	70	286
56	51	*	*	13	52	*
56	50	92	—3	8	29	229
*	*	*	*	8	22	*
56	50	96	5	7	19	208
58	50	102	0	12	47	167
56	49	99	—3	5	16	184
55	48	95	0	15	52	150
62	51	104	3	19	96	209
59	52	99	10	7	33	210
58	50	100	1	20	60	190
*	50	99	—1	*	46	183
60	51	105	—1	15	61	204
59	52	106	5	19	49	219
57	49	105	—11	17	76	145
*	*	*	*	14	46	*
56	47	101	—9	16	54	150
59	51	104	3	16	55	172
49	40	95	—11	19	55	*
51	42	101	—17	21	95	115
56	49	99	7	18	47	*
*	*	*	*	13	57	*
58	49	104	5	14	59	184
58	48	107	—13	17	87	134
59	51	105	—16	11	45	175
59	51	105	—16	11	45	175
*	*	*	*	17	76	*
56	48	100	13	16	50	175
61	52	*	*	14	57	97
58	50	104	1	11	50	188
63	53	107	7	15	66	*
60	53	109	—6	14	55	194
*	*	*	*	12	42	*
60	51	101	2	17	62	185
58	49	*	*	16	70	166
59	52	105	—7	10	43	166
62	53	110	0	10	38	187
60	53	107	—1	8	44	187
61	54	110	3	6	29	200
60	54	*	*	10	58	*
61	53	106	—1	6	20	182
58	50	105	—12	8	39	108
47	*	*	*	11	49	*